

AQUIFER STORAGE ISSUES IN FLORIDA

ASR 8 Conference, September 22 and 23, 2008



ASR 8 Conference Hotel:
Holiday Inn, Orlando Airport,
5750 T.G. Lee Blvd., Orlando, FL 32822
(Free shuttle from airport) (877 863 4780 for hotel room reservations)

WHAT IS THE ASR VIII CONFERENCE ALL ABOUT?

This is the American Ground Water Trust's eighth annual ASR event in Florida; bringing together scientists, engineers, planners, water-resource managers, concerned citizens, etc.

This 2008 program is dedicated to the memory of the late Richard Deuerling, Florida DEP, who for three decades was actively involved with implementation of the Underground Injection Control Program. Richard attended and presented at most of the Trust's annual ASR programs. Richard is fondly remembered by the state's many ground water practitioners with whom he had close professional connections.

Keynote presentation: **"Water Issues in Florida"**

Mimi Drew, Deputy Secretary, Florida Department of Environmental Protection

Conference presentations will address many issues, including:

- Making greater use of Florida's ground water storage potential
- Assessing the real economics of building storage dams
- Comparison of environmental impact of aquifer storage and non-aquifer storage solutions
- Updates on the latest engineering designs and pilot testing results
- Legal and regulatory authority over water management options
- Where is the recharge water? (Recycle? Storm runoff? Desalination?)
- Aquifer management success stories from around the United States
- How will changing climate impact Florida's hydrology?
- Aquifers and carbon sequestration – coming to Florida?

WHO SHOULD ATTEND? ⇒ Environmentalists ⇒ Politicians ⇒ Attorneys ⇒ Water Planning Specialists
⇒ Water Treatment Specialists ⇒ Geologists ⇒ Hydrogeologist ⇒ Hydrologists ⇒ Engineers ⇒ Landowners
⇒ Irrigators ⇒ Industry Leaders ⇒ State and Federal Agencies ⇒ Local Water Supply Regulators ⇒ Water
District Managers ⇒ Municipal and Water Utility Managers ⇒ State and Local Health Officials
⇒ Concerned Citizens

CONTINUING EDUCATION: The Trust will issue certificates of attendance
The Trust is an approved education provider for Florida Engineers



CONFIRMED CONFERENCE SPONSORS AND EXHIBITORS

(Exhibit and sponsor information): http://www.agwt.org/events/2008/08FLASR_ExhibitSponsorForm.pdf

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- ◆ Northwest Pipe
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- ◆ Severn Trent Services
- ◆ US Geological Survey

Day 1 Program - Monday September 22

7:30 – 8:30 **REGISTRATION / EXHIBITS**

8:30 to 12:05 **MORNING SESSION**

Moderator: Jon Arthur, Acting Director, FDEP/Florida Geological Survey, Tallahassee, FL

8:30 – 8:45

Andrew Stone, Executive Director, American Ground Water Trust, Concord, NH

The American Ground Water Trust Position on Aquifer Recharge, Storage and Recovery

8:45 – 9:15

Stuart Norton, Hydrogeologist, Jones Edmunds & Associates, Inc., Gainesville, FL, Don Ellison, ASR Projects Coordinator, Southwest Florida Water Management District, Brooksville, FL and Seth Kohn, Engineer, City of Bradenton, Bradenton, FL

Preliminary Results of Full-Scale Membrane Deoxygenation at the Bradenton ASR Facility - A Status Update

9:15 – 9:45

Peter J. Schreuder, President, and Dana J. Gaydos, Environmental Scientist, Schreuder Inc., Tampa FL

Feasibility of Using Mined Phosphate Lands to Naturally Treat Storm-Water Prior to Recharge: A Concept That Can Expand Regional Ground Water Resources Availability

9:45 – 10:15

David Pyne, President, ASR Systems, Gainesville, FL; Pieter J. Stuyfzand, Hydrogeology Group, Faculty of Earthsciences, Utrecht University, Utrecht, The Netherlands and Christopher Brown, Senior Geotechnical Engineer, Golder Associates, Jacksonville, FL

The ASR – Arsenic Surrogate Model: A Giant Leap Forward

10:15 – 10:30

Questions & Discussion on Morning Session Presentations

10:30 – 11:00 **BREAK / EXHIBITS**

11:00 – 11:30

Keynote Address:



**Mimi Drew, Deputy Secretary, Regulatory Programs and Energy,
Florida Department of Environmental Protection, Tallahassee, FL**

Water Issues in Florida

11:30 – 12:00

Brian Files, Senior Project Manager, Parsons, Jacksonville, FL
***Construction Cost Comparison of Surface Reservoir and ASR Storage Options for the
Comprehensive Everglades Restoration Program***

12:00 – 12:05

Questions & Discussion on Morning Session Presentations

12:05– 1:15 **LUNCH / NETWORKING / EXHIBITS**

1:15 to 4:45 AFTERNOON SESSION

**Moderator: Ann Tihansky, Hydrologist - Science Communications, U.S. Geological Survey,
Florida Integrated Science Center, St. Petersburg, FL**

1:15 – 1:45

June Mirecki, Hydrogeochemist, Army Corps of Engineers, Jacksonville, FL and Bob Verrastro, Lead
Hydrogeologist, South Florida Water Management District, West Palm Beach, FL
New Challenges and Opportunities for Environmental ASR in South Florida

1:45 – 2:15

Andy Horn, Hydrogeologist, CDM, Denver, CO
Methods to Evaluate and Rank Potential Aquifer Recharge Sites: Colorado's Experience

2:15 – 2:45

Kent Madison, President, 3R Valve LLC, Echo, OR
Twenty Years of ASR Success in Oregon

2:45 – 2:55

Questions & Discussion on Afternoon Session Presentations

2:55 – 3:15 **BREAK / EXHIBITS/ NETWORKING**

3:15 – 3:45

Chris Brown, Senior Geotechnical Engineer, Golder Associates, Jacksonville, FL
Opportunities for Surface Water Reservoir - ASR Conjunctive Use Projects in Georgia

3:45 – 4:15

Mark B. McNeal, CEO, ASRus, LLC, Tampa FL
Obtaining the First Operating Permit for “Reclaimed Water ASR” at Englewood, FL

4:15 - 4:45

Joe Haberfeld, UIC Program Manager, Florida DEP, Tallahassee, FL
Regulatory Update: Consent Orders, Administrative Orders, Cycle Testing Recommendations etc.

4:45 – 4:50

Questions & Discussion on Afternoon Session Presentations

4:50 – 6:30 Cash bar - **RECEPTION / EXHIBITS / NETWORKING**

Day 2 Program – Tuesday September 23

8:20 to 12:35 MORNING SESSION
Moderator Mark B. McNeal, CEO, ASRus, LLC, Tampa FL

8:20– 8:30 ***Summary of Previous Day’s presentations & discussions***

8:30 – 9:00

Glenn Forrest, Senior Project Manager, Glenn E Forrest Inc., Orlando, FL and Peter Ritchey, Technology Development Manager, Severn Trent Water Purification, Inc., Pittsburgh, PA
SJRMWD ASR Program and Catalytic de-oxygenation in DeLand, FL

9:00 – 9:30

David MacNevin and Lyle Munce, Process Engineers, Carollo Engineers, Sunrise, FL and Bob Verrastro, Lead Hydrogeologist, South Florida Water Management District, West Palm Beach, FL
The Next Generation of ASR Disinfection Technologies - Overcoming the Limitations of Chlorination and UV Disinfection

9:30 – 10:00

Katherine Bell, Environmental Engineer, CDM, Nashville TN and Lee P. Wiseman, Principal Engineer, CDM, Maitland, FL
Managing Geochemical Conditions - Selecting a Pretreatment Design

10:00 –10:10

Questions & Discussion on Morning Session Presentations

10:10 – 10:30 **BREAK / EXHIBITS**

10:30 – 11:00

Julio Paredes, President, Laboratory Data Consultants FL, Inc. Royal Palm Beach, FL

Water Quality Data for ASR Projects: How to Effectively Receive, Deliver, Manage and Validate Electronic Field and Laboratory Information

11:00 – 11:30

Mike Weatherby, Ed Rectenwald, and Gordon Kennedy, MWH Americas, Cape Coral, FL
Bench-Scale Testing to Evaluate Potential Subsurface Geochemical Reactions

11:30 – 12:00

Catherine Romanak, Research Associate, Bureau of Economic Geology, Austin, TX
(Also affiliated with the Gulf Coast Carbon Center)
What to do with CO₂? The Knowns and Unknowns of Geologic Sequestration: Updates from DOE National Energy Technology Lab (NETL) Field Test Sites in West Texas and Mississippi

12:00 – 12:30

Larry Cole, Environmental Engineer, EPA Region 4, Atlanta, GA
Deep Aquifer Carbon Sequestration Projects in the Southeast: Current Status and Future Outlook

12:30 -12:35

Questions & Discussion on Morning Session Presentations

12:35 – 1:15

LUNCH / NETWORKING / EXHIBITS

1:15 to 4:00 AFTERNOON SESSION

Moderator: Andrew Stone, Executive Director, American Ground Water Trust

1:15 – 1:45

Weixing Guo, Senior Scientist; Robert Maliva, Senior Hydrogeologist; and Thomas Missimer, Vice President, Schlumberger Water Services USA Inc., Ft. Myers, FL
Seminole Tribe of Florida ASR project: Use of Advanced Borehole Geophysics for Analysis of Storage Zone Heterogeneity

1:45 – 2:15

Tony Morgan, Manager - Western Operations, Layne Geosciences, Layne Christensen Company, Fontana, CA
The Use of Neutron and Compensated Density Technologies to Monitor Water Recharge at ASR Facilities – Examples from Southern California

2:15– 2:45

Joseph D. Hughes, U.S. Geological Survey, Florida Integrated Science Center, Tampa, FL
Susceptibility of the Floridan Aquifer System to Saltwater Intrusion from Sea-level Rise

2:45– 3:15

Ed Finch, President, Diversified Drilling Corporation, Tampa, FL
ASR Progress in Florida: A Well Driller's Perspective

3:15 -3:45

John Powers, Senior Hydrogeologist, CH2M Hill, Tampa, FL
Indirect Potable Re-use: ASR by Another Name

3:45 – 4:00

Panel and Participant Wrap-up – ASR in Florida: Where do we go from here?